

A NEW SPECIES OF *POLYCENTROPUS* (TRICHOPTERA: POLYCENTROPODIDAE) FROM ARKANSAS¹

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ABSTRACT: *Polycentropus stephani*, a new species from Arkansas, is described and illustrated. This species is a member of the *confusus* species-group and is most closely related to *P. chelatus*, *P. floridensis* and *P. neiswanderi*, but differs primarily in having a prominent spur on the basoventral swelling of the phallus. Known only from the interior highlands, *P. stephani* may be endemic to that region.

The *Polycentropus confusus* species-group (Trichoptera: Polycentropodidae) consists of 16 previously described species with all occurring in eastern North America (Hamilton *et al.* 1990). During a survey of the Trichoptera of the interior highlands of Arkansas (Bowles and Mathis 1989), some undescribed adult caddisflies belonging to the *Polycentropus confusus* species-group were collected with ultraviolet-light traps. These caddisflies were initially identified as *Polycentropus* species B and C (Bowles and Mathis 1989), but were subsequently determined to be conspecific. Herein, we describe that species. Morphological terminology follows that of Hamilton (1986) and Hamilton *et al.* (1990).

The holotype and allotype are deposited at the National Museum of Natural History (NMNH), Washington, DC. Paratypes are deposited at the Royal Ontario Museum (ROM), Florida State Collection of Arthropods (FSCA), Illinois Natural History Survey (INHS), University of North Texas (UNT), and the NMNH. All material is preserved in 70% ethanol.

Polycentropus stephani, new species (Figures 1-4)

Polycentropus species B and C. Bowles and Mathis, 1989:237

Adult. Length of forewing: Male, 5.1 mm; female, 6.1 mm. Body and wing color light brown. Setae on dorsum of head and thorax tan.

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Male genitalia. Abdominal sternite IX large, semicircular in lateral view, anterior margin rounded, posterior margin sinuate. Intermediate appendages apically free, slightly decurved, proximally fused to membranous dorsum of segment IX. Body of each preanal appendage short, with broad emargination of posterior margin; dorsal process long and decurved. Each inferior appendage with elongate ventral portion, in lateral view only slightly narrowed distad, in ventral aspect narrowing gradually distad; dorsobasal arm of inferior appendage large, curving posterad, in lateral view narrowing abruptly into ventral portion, with turned-in blade-like portion at base, in caudal view this part broadly triangular with apex rounded. Phallobase tubular, moderately decurved, basoventral swelling bearing a prominent caudally directed spur; phallic sclerite elongate.

Female genitalia. Sternite VIII broad, membranous; lateral lobes elongate, expanded at mid-point, tapering posteriorly. Vaginal sclerites forming vase-shaped sac; vulvar sclerite circular, with rimmed opening posteriorly.

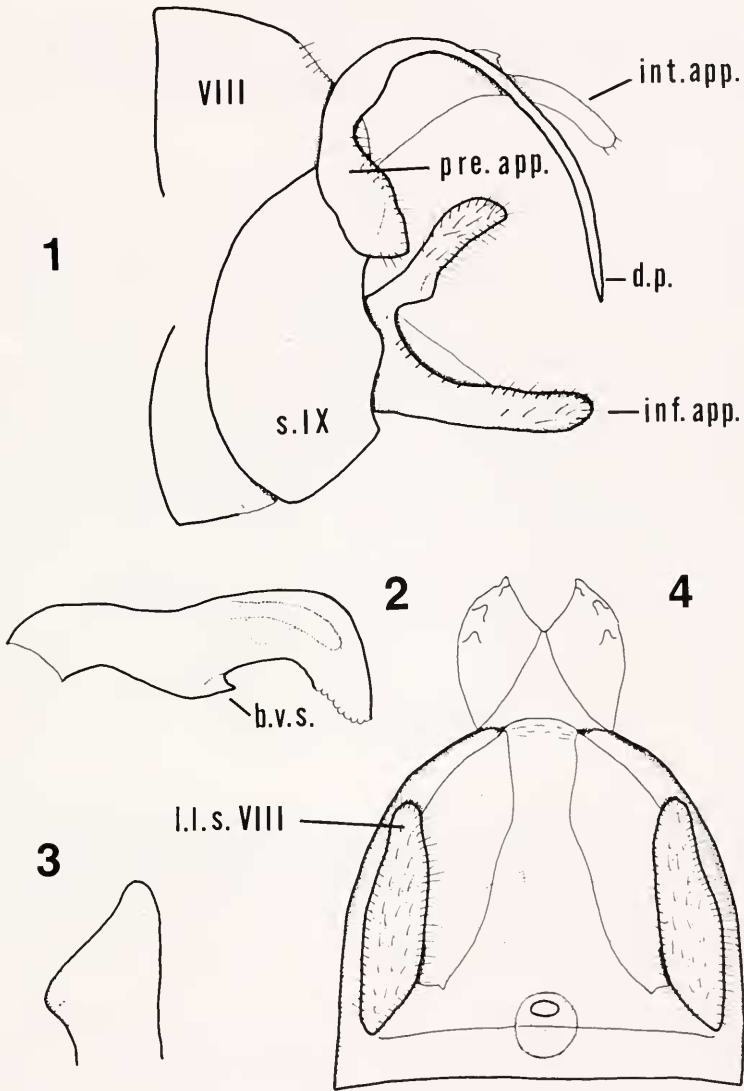
Type Material: United States, Arkansas. **Holotype.** ♂, Logan Co., Mt. Magazine, Green Beach, Gutter Rock Creek, 1 May 1987, R. Leschen, UV-light (NMNH). **Allotype.** ♀, same data as holotype (NMNH). **Paratypes.** 1 ♂, 1 ♀, same data as holotype (FSCA); 1 ♂, 1 ♀, same data as holotype (ROM); 2 ♂♂, Independence Co., unnamed intermittent stream, 18 April 1987, P. Harp (NMNH, UNT); 2 ♂♂, 2 ♀♀, Washington Co., Devil's Den State Park, 22 April 1989, C. E. Carlton, blacklight (NMNH); 1 ♂, Washington Co., 2 mi. N Bugscuffle, dirt road at Hwy 265, near Strickler, 20 April 1987, R. Leschen, at light (INHS).

Etymology. We name this species in honor of Karl Stephan whose unfailing enthusiasm for collecting insects has been invaluable in the development of the interior Highlands caddisfly inventory.

DISCUSSION

This species belongs in the *confusus* species-group and exhibits characters similar to several species within that group. The broadly emarginate basal portion of the preanal appendage is similar to that observed for several members of the *confusus* species-group including *P. floridensis* Lago and Harris, *P. neiswanderi* Ross, and *P. thaxtoni* Hamilton and Holzenthal. The phallus of *P. stephani* is most similar to that of *P. chelatus* Ross and Yamamoto from which it differs in the presence of a prominent spur situated on the basoventral swelling of the phallobase. This spur is unique among the species of the *confusus* species-group. The female of *P. stephani* bears resemblance to several other species in the *confusus* species-group. However, the females of *P. chelatus*, *P. floridensis* and *P. thaxtoni* are unknown and detailed comparisons among these species can not be completed at this time.

This species has been collected only from the interior highlands of Arkansas and may be endemic to the region. *Polycentropus centralis* Banks was the only other member of the *confusus* species-group collected in conjunction with *P. stephani*. Small intermittent streams are the probable habitat of the immatures based on collection of the adults. However, nothing is known about the biology of this species. A description of the type locality was presented by Mathis and Bowles (1989), and a description of a paratype locality by Flint and Harp (1990).



Figs. 1-4: *Polycentropus stephani* n. sp. 1. Male genitalia, lateral. 2. Male phallus, lateral. 3. Dorsobasal arm of inferior appendage, caudal. 4. Female genitalia, ventral. Abbreviations: b.v.s., basoventral spur; d.p., dorsal process of preanal appendage; l.l.s. VII, lateral lobe of eighth sternite; pre. app., preanal appendage; s. IX, ninth sternite; VIII, eighth tergite.

ACKNOWLEDGMENTS

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 SOCIETY MEETING OF OCTOBER 28, 1992

 INSECTS IN THE CLASSROOM—
 TURNING KIDS ON TO SCIENCE WITH BUGS

Dr. Harold B. White, organizer
 University of Delaware

A diverse set of speakers and styles highlighted a presentation on teaching entomology in schools. This meeting, more in line with a workshop than a lecture, featured presentations by five entomologists drawn from the Science Alliance's Speakers Bureau, a resource "pool" of professionals available for speaking to students in Delaware schools. The objectives of this meeting, as outlined by Dr. White, were twofold: to give teachers ideas on presenting science (and particularly entomology) to their students, and to provide encouragement to entomologists to make themselves available for presentations in the schools. Dr. White also highlighted the Society's educational activities, including the Field Day and the Calvert Prize.

Dr. Douglas Tallamy, University of Delaware, talked on "Introducing Insect Behavior" and featured an excellent series of slides related to the subject. A major point he attempts to bring out to students is to consider how an insect's appearance is related to its behavior, e.g., defensive, mimicry, crypsis, etc. and in so doing attempts to get beyond many students' impressions that insects are grotesque. An impressive set of slides focused on the monarch butterfly and other milkweed insects and illustrated how this complex of insects is able to avoid the latex flow when feeding on milkweed leaves. Another interesting series of slides

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